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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SAADAT, CAMERON

ART UNIT	PAPER NUMBER
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3713

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,455

Applicant(s)

RESOR, CHARLES P.

Examiner

Cameron Saadat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “and/or” provides multiple alternatives.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Ho et al. (USPN 6,212,358; hereinafter Ho).

Regarding claim 16, Ho discloses an electronic learning aid for teaching arithmetic skills, comprising: a question engine 110 for selecting and communicating to a user a plurality of questions, one question at a time; and a question-probability selector operably associated with said question engine and arranged to allow a user to select one of a plurality of question-

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probability settings (Col. 11, lines 57-61), such that when a setting is selected and said question engine is communicating questions, (a) each question has a predetermined probability of being the next question communicated, (b) said predetermined probability is equal to or greater than zero percent and less than or equal to one hundred percent, (c) the probability of a question with a predetermined probability greater than zero percent can differ from the probability of a different question with a probability greater than zero percent; and (d) the probability of a question with a probability greater than zero percent can differ from a greater-than-zero-percent probability of the same question when a different one of said settings is selected (Col. 12, lines 1-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. (USPN 6,212,358; hereinafter Ho).

Ho discloses all of the claimed subject matter with the exception of explicitly disclosing that the electronic learning aid has no external source of electricity and weighs less than one kilogram. However, it is the examiner's position that applying the feature of portability to educational devices is well known in the art, and therefore it would have been obvious to an artisan to modify the electronic learning aid described in Ho by providing portability features, in order to allow a user to easily transport the electronic learning aid thereby allowing use of the learning aid without geographical restrictions.

Claims 1-3, 8, 10, 12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. (USPN 5,934,909; hereinafter Ho)

Regarding claim 1, Ho discloses an electronic learning aid for teaching arithmetic skills, comprising: a memory 120 for storing questions for presentation to a user; a question engine 112 for selecting and communicating to the user a plurality of questions from the questions stored in memory; an input device 226 for enabling said user to answer each question communicated to said user by said question engine; a scorer 102 for generating an evaluative score for a set of questions communicated by said question engine, said score being determined by how well said user answered the questions constituting said set by means of said input device; a score memory 113 for storing a predetermined plurality of evaluative scores generated by said scorer and information relating to said scores; and a display for displaying visually, in response to an input, each evaluative score stored in said score memory simultaneously with information relating to said score (Col. 13, lines 60-67). Ho discloses all of the claimed subject matter with the

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exception of explicitly disclosing that the electronic learning aid has no external source of electricity and weighs less than one kilogram. However, it is the examiner's position that applying the feature of portability to educational devices is well known in the art, and therefore it would have been obvious to an artisan to modify the electronic learning aid described in Ho by providing portability features, in order to allow a user to easily transport the electronic learning aid thereby allowing use of the learning aid without geographical restrictions.

Regarding claim 2, Ho discloses an electronic learning aid, wherein said display displays said evaluative scores and related information one score at a time (Col. 13, lines 60-67).

Regarding claims 3, 12, 14, Ho discloses all of the claimed subject matter with the exception of explicitly disclosing a switch for turning the learning aid to an off state and wherein the score memory and question memory are arranged to retain information when the learning aid is in said off state. However, it is the examiner's position that it is notoriously well known to utilize non-volatile memory for retaining memory contents when power is turned off. It would have been obvious to an artisan to modify the score memory described in Ho, by providing non-volatile memory in order to retain score information when power is turned off.

Regarding claim 8, Ho discloses an electronic learning aid, for teaching arithmetic skills, comprising: a memory 120 for storing questions for presentation to a user; a question engine 112 for selecting and communicating to the user a plurality of questions from the questions stored in memory; an input device 226 for enabling said user to answer each question communicated to said user by said question engine; a scorer 102 for generating an evaluative score for a set of questions communicated by said question engine, said score being determined by how well said

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user answered the questions constituting said set by means of said input device; a score-communication device for communicating said evaluative score to said user (Col. 13, lines 60-67); and a set of missed-questions memory for storing a predetermined plurality of questions that were answered incorrectly; the question engine, in conjunction with said missed-questions memory and in response to input, being arranged to develop and communicate to said user questions stored in said missed-questions memory (Col. 7, lines 48-52, Col. 8, lines 18-22; Col. 9, lines 34-53).

Regarding claim 10, Ho discloses an electronic learning aid, wherein, in response to input, said question engine can, from the same group of questions stored in said missed-questions memory, develop and communicate to said user a plurality of scored sets of questions (Col. 10, lines 49-50).

Claims 4-7, 9, 11, 13, 15, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. (USPN 5,934,909; hereinafter Ho) in view of Sonnenfeld (USPN 6,112,049).

Regarding claims 4, 9, and 11 Ho discloses an electronic learning aid, comprising score memory 113 for storing and accessing most recent scores (Col. 5, lines 15-29) of sets of mastered and sets of missed questions. Ho does not explicitly state that the score memory discontinues storing scores for a set of questions when it's necessary for storing a more recent set of questions. However, it is recognized that a storage medium provides a limited amount of storage, and it is therefore inherent to either delete old information to create more storage space for more recent information or to retain old information while expanding storage capacity. This

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solution is also described in Sonnenfeld, who teaches a learning aid wherein score information may be deleted from a storage medium (Col. 70, lines 54-58). Thus, it would have been obvious to one of ordinary skill in the art to modify the score storage unit described in Ho, by deleting dated scores to create storage space for updated score information in order to keep track of a student's most recent performance results, and thereby providing updated feedback to the student regarding test results.

Regarding claim 5, Ho discloses an electronic learning aid, wherein said display displays said evaluative scores and related information one score at a time (Col. 13, lines 60-67).

Regarding claims 6, 7, 13, 15, 18, Ho discloses all of the claimed subject matter with the exception of explicitly disclosing a switch for turning the learning aid to an off state and wherein the score and question memory are arranged to retain scores when the learning aid is in said off state. However, it is the examiner's position that it is notoriously well known to utilize non-volatile memory for retaining memory contents when power is turned off. It would have been obvious to an artisan to modify the score memory described in Ho, by providing non-volatile memory in order to retain score and question information when power is turned off.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. (USPN 5,934,909; hereinafter Ho '909) in view of Ho et al. (USPN 6,212,358; hereinafter Ho 358').

Regarding claims 19-21 Ho ('909) discloses a question probability selector (Col. 15, lines 30-33) but does not explicitly disclose the feature of allowing a user to select question-probability settings wherein the probability of same questions and different questions can differ.

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However, Ho ('358) teaches a learning aid, comprising a probability selector that allows a user to select question-probability settings (Col. 11, lines 58-62), and wherein the probability setting of same questions or different questions can differ depending if the question is a learnt or un-learnt line item (Col. 12, lines 1-65). Hence, in view of Ho ('358), it would have been obvious to one of ordinary skill in the art to modify the probability selector described in Ho ('909), by allowing a user to select probability settings in order to assign probability rules to questions thereby determining whether to present learnt subject or unlearnt subject matter and to further reclassify questions as learnt or unlearnt subject matter based on a student's performance.

Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papadopoulos (USPN 6,099,320) in view of Yamauchi et al. (USPN 3,818,483; hereinafter Yamauchi).

Regarding claims 22-23, Papadopoulos discloses an electronic learning aid, comprising: a question engine for selecting and communicating to a user a plurality of questions, one question at a time; and an input device for use by the user to respond to the questions, said question engine having at least one mode in which the time to respond to the questions has a per question limit (Col. 6, lines 9-15). Papadopoulos does not explicitly disclose the feature of increasing a response time limit for questions having a correct response that requires entry of more than one alphanumeric character. However, Yamauchi teaches an electronic learning aid wherein a student must respond to question within a specified time limit, and further indicates that it is well known to modify the time limit for responding to a question, based on the complexity of the correct response. Therefore, it would have been obvious to one of ordinary skill in the art to modify the question time limit described in Papadopoulos, by increasing the

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question response time limit based on the complexity of the correct answer, in order to provide sufficient time for a student to respond based on the complexity of the answer.

Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziv-El (USPN 6,302,698) in view of Lemelson et al. (USPN 5,823,788).

Regarding claim 24, Ziv-El discloses an electronic learning aid for teaching arithmetic skills, comprising: a question engine for selecting and communicating to a user a plurality of questions, one question at a time; and a manually operable input device for use by the user to respond to the questions, said question engine having at least one mode in which the engine ceases accepting a response to a question upon the entry of an incorrect alphanumeric character, said question engine in response to the entry of an incorrect alphanumeric character displaying a subsequent question (See Abstract). Ziv-El discloses all of the claimed subject matter with the exception of disclosing the feature of waiting for a predetermined period of time before accepting a response to a subsequent question (as per claims 24 and 26). However, Lemelson teaches an electronic learning aid, wherein responses are not accepted for a predetermined period of time during a question (Col. 16, 53-61). It would have been an obvious to one of ordinary skill in the art to provide periods of time wherein responses are not accepted, in order to provide a "pens down" command to void all subsequent responses once a response has been received.

Regarding claim 25, Ziv-El further discloses a learning aid, wherein the alphanumeric characters are numerals and the questions are arithmetic problems, the question engine being capable of accepting a sequence of numerals in response to a particular arithmetic problem, the

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question engine further being responsive to entry of an incorrect numeral in the sequence to display a subsequent arithmetic problem (See Fig. 12).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron Saadat whose telephone number is 703-305-5490. The examiner can normally be reached on M-F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa J Walberg can be reached on 703-308-1327. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CS


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